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SKYLINE MINE OVERLAND CONVEYOR CONSTRUCTION PLAN

(Revision - June 9, 1992)

SUMMARY

This plan will describe the major areas and methods for the construction of an overland conveyor to transport coal from the Skyline minesite to the rail loadout facility. It will describe the companies doing the work and the means they will use to minimize environmental disturbance as a result of this installation.

There are five main areas where work will take place. Three of these areas are on existing permitted disturbed areas. The other two are on areas that will be permitted as part of our current permitting process. These areas are (1) crusher building and mine access road tunnel; (2) existing conveyor bench; (3) side hill without a bench; (4) Highway 264 and Eccles Creek crossing; (5) conveyor head and truck dump.

There are five main phases to the work. They are (1) excavation and installation of concrete foundations; (2) erection of steel structures and installation of mechanical components; (3) installation of electrical equipment and wiring; (4) installation of the belting; and (5) testing, training and start up.

CONTRACTORS

The general contractor is Robins Engineers and Constructors of Denver, Colorado. They have overall responsibility for the design, procurement, and construction management for this project. The main site erection contractor is TIC (The Industrial Company) of Steamboat Springs, Colorado. They have an outstanding reputation as a very capable, professional firm with a good track record on projects that have many physical and environmental constraints such as this overland. They have done work for Kennecott, Cyprus-Plateau, and are currently building a cogeneration facility at Sunnyside, Utah.

There are two main subcontractors to TIC. Mine & Mill Engineering of Salt Lake City has the responsibility of designing each of the foundations for the conveyor. Kleinfelder, also of Salt Lake City has done the geotechnical assessment of the conveyor route. A technician from this company will observe the excavation of each and every foundation and will make this ultimate determination of its depth, depending upon the soil and rock conditions encountered.

CRUSHER BUILDING AND MINE ROAD TUNNEL

The work in the crusher building will consist of straight forward demolition of concrete walls and floors by mechanical means. New, massive concrete foundations will be formed and poured in the crusher building. All of this work is tributary to the mine site sedimentation pond. All concrete trucks will be washed out into an acceptable pit located on one of the minesite benches.

Work on the mine road tunnel will be a little more complicated. The first activity will be to excavate and grade the eastern slope of the existing mine access road. The extra earth and rock will be either stockpiled at the rail loadout prior to future disposal at the Scofield waste rock site, or stockpiled on the Mine 3 bench for use in final grading of the area. Erosion control measures will be installed around this area, which at this point will not all drain to the sedimentation pond.

After this area has been prepared, a 100 ft. long, 11 ft. high multiplate steel tunnel will be erected. At the appropriate time, coinciding with a general shutdown of Skyline Mine, around-the-clock excavation of a cut through the mine road will commence. This excavation will at all times be graded so that any drainage will flow westward onto the minesite.

When the cut is sufficiently large, a base of sand and graded fill will be compacted into the bottom. Then the pre-erected tunnel lining will be jacked and winched into place. It will then be carefully backfilled on the sides and top, with a precast concrete slab set into place to help distribute future heavy loads.

At that point, the mine road and the new access road to the east portal of the tunnel will be graded to the final contours and will provide for drainage back to the mine. Erosion control will be maintained on the eastern fill and cut slopes that do not drain to the sed pond until revegetation occurs.

EXISTING BENCH AREA

A precut bench currently exists to the north of, and generally above State Highway 264. It extends from the mine access road to just over halfway down Eccles Canyon.

The predominant activity along this bench will be the excavation and pouring of caisson foundations for the support of the overland conveyor trusses. The next largest activity will be the erection of the trusses themselves.

To the extent possible the bench will be left much as it is right now. There will be some minimum grading required to obtain access along the bench for tracked equipment. In some places numerous rocks have accumulated on the bench and in other places dribble from the cut slopes above has reduced the navigable width of the bench. Material resulting from the required grading will be distributed and leveled out along the bench. Reasonable care will be taken to prevent this material from being cast over the outside edge of the bench and onto the out slope. Significant accumulations of rocks and dirt in the barrow ditch along side of the highway will be scooped up and hauled to the railroad loadout and stockpiled for future removal to the Scofield waste rock site.

The foundations will be bored by means of a tracked backhoe mounted drill. It will use flighted auger in earthen material and a core barrel in competent rock. The holes will be 2 ft. in diameter and 10 to 20 feet deep depending on the material encountered. The main truss foundations will be 60 feet apart. Most, but not all of the main foundations, will have a hole for a transverse support drilled near to it on the bench or just up on the adjacent cut slope. These will be 2 feet in diameter and 6 to 10 feet deep. Every 5th or 6th main foundation will have longitudinal support installed in line with the conveyor.

The drilling machine will move from hole to hole, generally along the bench. Some holes may be reached with the machine located on the shoulder of the highway.

Spoil material from each hole will most often be deposited on the bench in the immediate vicinity of the hole being drilled. At some point a small bull dozer or tracked loader will spread the material out on the bench. In some cases the material may be transported to another area on the bench for final reclamation grading purposes. Cored rock from each hole will be spread if possible or hauled to the above mentioned stockpile at the railroad loadout for future removal to the Scofield waste rock site.

Control measures will be installed at the bottoms of the bench grades to control erosion from a series of holes on the slopes above. On particularly long grades, additional intermediate controls may be installed.

After a number of holes have been prepared, a rebar cage will be dropped into place by means of a crane operating from the highway or the shoulder of the highway, depending upon the available room. The same crane will lift concrete up to the holes in a concrete pouring bucket. Any significant spillage will be allowed to harden, and then whole section of the bench will be cleaned at one time. All the holes on the bench are expected to be dry so contaminated water should not be a problem. Again, concrete trucks will be washed out in acceptable pits at either the mine or rail loadout sites. The concrete will be batched at the Cox plant in Huntington, Utah. Concrete will be brought to the site in standard concrete transit mixers.

After the concrete has sufficiently hardened, individuals will walk along the bench with portable tools and install the anchor bolts which will hold the steel bents (supports) which will in turn hold up the conveyor trusses.

OFF-BENCH HILL SITE

The method of drilling of the concrete foundations on the natural canyon hillside where there is no graded bench will be somewhat different than the on bench installations. The size and depth of the holes will be much the same except for where they may be dug by hand. Concrete handling, placement, and cleanup will be the same as for the bench area.

The same track mounted drill will bore the holes where it can reach them. It will generally operate from the north shoulder of Highway 264. There may be times when the ditch area will be lagged with timber mats. The drill machine will then walk up the toe of the slope from one half to one whole track length. That is the back end of the tracks will be resting right near the toe of the slope. The tracks should not spin and thus very little disturbance should result. Such as there is will be repaired.

One other difference here is that spoil material will be discharged into the barrow ditch or directly into small dump trucks. Topsoil (A & B horizons) will be kept separate and deposited on the topsoil pile at the railroad loadout area. In any case the resultant spoil material will be hauled to the rail loadout area.

After the hole is drilled, and before the end of the day, erosion control measures (straw bales or silt fences) will be installed just down slope of the drilled hole. It will be made wide enough to treat any spoil material that was not practical to pick up around the collar of the hole. It is expected that this might be an area about 8 feet across. (See attached drawings for typical straw bale and/or silt fence installation).

Please note that no drilling will be done while rainstorms, heavy enough to cause surface flow, are in progress.

Where the foundations are too far up slope for the track mounted drill to reach, a special drill will be used. It is a skid mounted rig that will be set in place on the hillside by a crane. It will be held in place by a cable fastened to an anchor drilled into rock or soil up slope from the rig within the permit area. This anchor will be installed by hand held portable drills. At the completion of work at that station, the drill will be moved to the next location or taken off the hill by crane. The anchors will be cut off at ground level.

Spoil material from these holes will be loaded into "skips" (essentially big buckets) handled on and off the hill by crane. The skips will be unloaded into dump trucks, which will then haul the material to the rail loadout site.

There may be some foundations too far up slope to be reached even by this last system. In that case the foundation holes will be hand dug.

In this case, as in all cases where the workers must access the collar of the foundation holes by walking up a steep slope, they will gain access by placing portable stairways. They will rest on the existing slope and will have handrails. We fully expect these stairways to improve safety, decrease disturbance of the slopes, and increase productivity.

These few hand dug foundations will be excavated by pick and shovel and possibly some air powered tools. The walls of each pit will be shored as required to ensure the safety of the workers and to help limit the size of the opening. Again, spoil material will, to the reasonable extent possible, be loaded into skips and hauled away. In this case some material will be left near the hole and used for backfill around the resultant foundations.

HIGHWAY 264 AND ECCLES CREEK CROSSING

This area has 5 significant foundations which have special conditions. Each foundation will require several bored holes at least 20' deep. Once the holes are filled with reinforced concrete, a rectangular or triangular concrete cap will be formed and poured over the top.

The two foundations on either side of highway 264 will be bored by the crawler mounted drill reaching from the highway. The transverse brace for the southern foundation may require that the skid mounted drill be placed by crane right at the base of the highway fill in that area.

Two other foundations, one just to the northwest of the access road into the truck dump, and the other just to the northwest and over the fill bank from the truck dump itself will be bored by the track mounted drill from locations on the access roadway.

One foundation, GB3, will require the tracked drill to walk off the access road and down a moderate fill slope that was revegetated. If the sod is broken in this process, straw bales will be placed across the resulting track depressions in several locations. The machine will work from the uphill side of the required holes. As the holes are drilled, spoil material will be loaded into skips and hauled out by crane, dumped into trucks and taken to the railroad loadout for storage. In this particular case, and in the case of any of the side hill holes where recoverable quantities of topsoil are encountered, this material will be segregated and stored on the railroad loadout topsoil stockpile. A Kleinfelder soil technician will make the dermination on a hole by hole basis as to what is salvageable and segregable topsoil. See Table on Page 8 for projected topsoil recovery. Non-topsoil material will be stored at the railroad loadout and later transported to the Scofield waste rock disposal site for use there.

We anticipate encountering subsurface water in some or all of these particular caisson holes (GB 2 & 3). When these holes are dewatered, the effluent will be pumped in hoses to a drainage ditch east of the truck dump that is tributary to the rail loadout sedimentation pond. Any water resident on top of the concrete as these holes are filled to the surface by the tremie method will be pumped out in hoses to the above mentioned drainage ditch.

Special precautions will be taken with GB5, 4, 3, and 2 foundations, which are close to Eccles Creek. All excavations will be done from the uphill side, as far from the creek as possible. Between the excavation and the creek a double semi-circular barrier of silt barrier fence and straw bales will be placed in advance of any excavation work. This barrier will be maintained until all work is complete and revegetation is in place. In the case of GB3, a triple barrier (2 rows of straw bales and one row of silt fence) will be placed between the creek and the excavation.

During the time that construction of the foundations for GB5, 4, 3, and 2 is taking place, Eccles Creek will be monitored daily above and below the work. The stream will be tested for total suspended solids, settable solids, and turbidity. Records of these tests will be maintained at the minesite. Copies of these records will be mailed to DOGM weekly.

TRUSS ERECTION

The truss sections along the conveyor route are 60 feet long and weigh 12,000 lbs. They will come from Selway in Stevensville, Montana, completely assembled and painted, including roofing, siding, conveyor idlers and electrical conduits.

Flat bed trucks will bring the truss sections up from the TIC staging area two at a time. When the truck is spotted the section will be rigged and lifted into place with a 90 ton rough terrain crane.

Generally, the crane will be working from the shoulder of the highway. There may be occasions when, in order for the crane to reach far enough, that the two northside out riggers may touch the hill slopes near the toe. In that instance the operators will hand dig a 2 ft. by 2 ft. hole to provide the proper purchase for the foot pad of the outrigger. This hole will be back filled and covered and erosion control put in place as soon as the crane relocates.

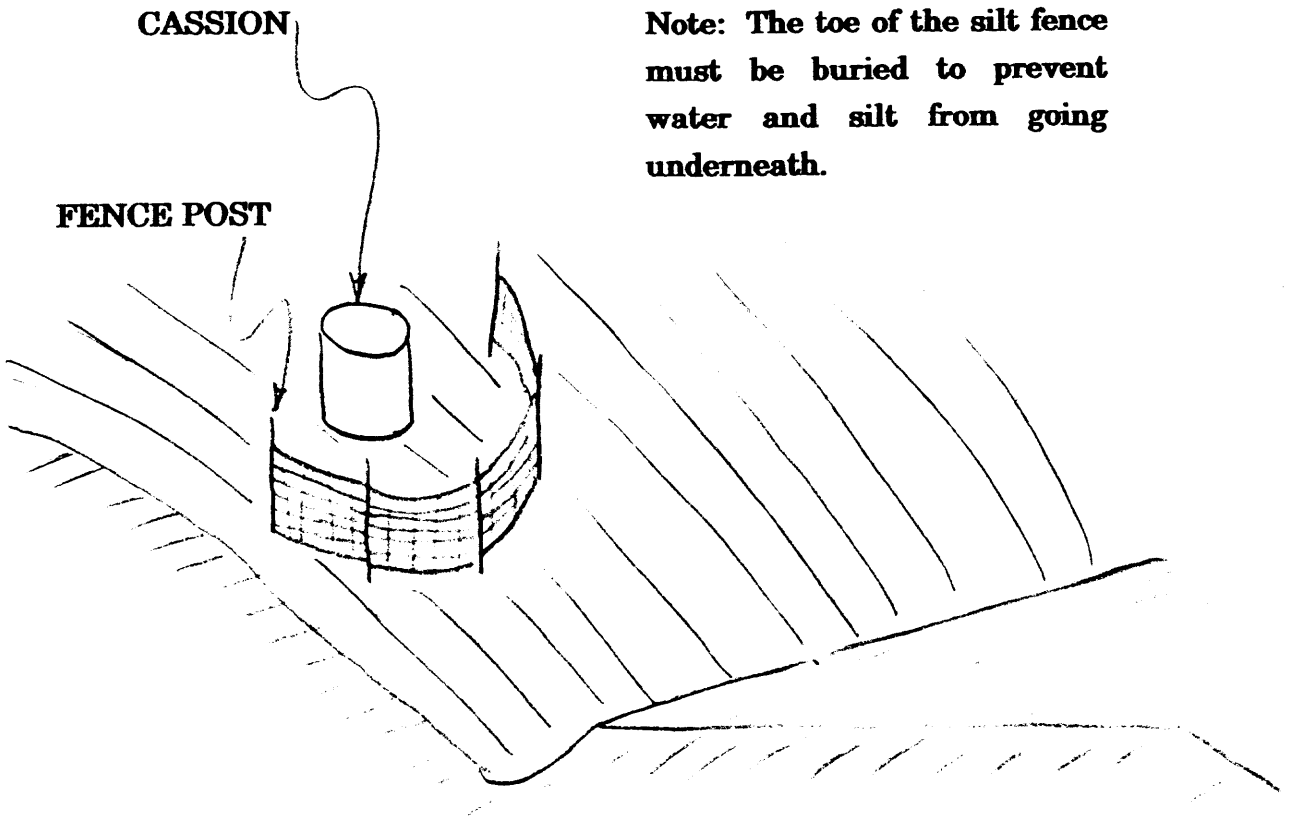
ELECTRICAL INSTALLATION/SIDING

The final pulling of electrical wires and covering of the truss connections with siding will be accomplished using the maintenance mancart which rolls along the top of the conveyor. There is no walkway along the conveyor. This makes maintenance access more difficult for the mine operators, but also makes it more difficult for access by unauthorized persons.

Some access and support by foot traffic and crane may be necessary.

BELTING INSTALLATIONS

Near the head of the conveyor, 18 ton rolls of belting, each 63" wide and 1150 ft. long will be set into a cradle. Each roll will be jointed to previously installed belting by a "vulcanizing process" to make a seamless splice. Once this is done, the belting will be pulled through the idler rolls by means of a winch cable.

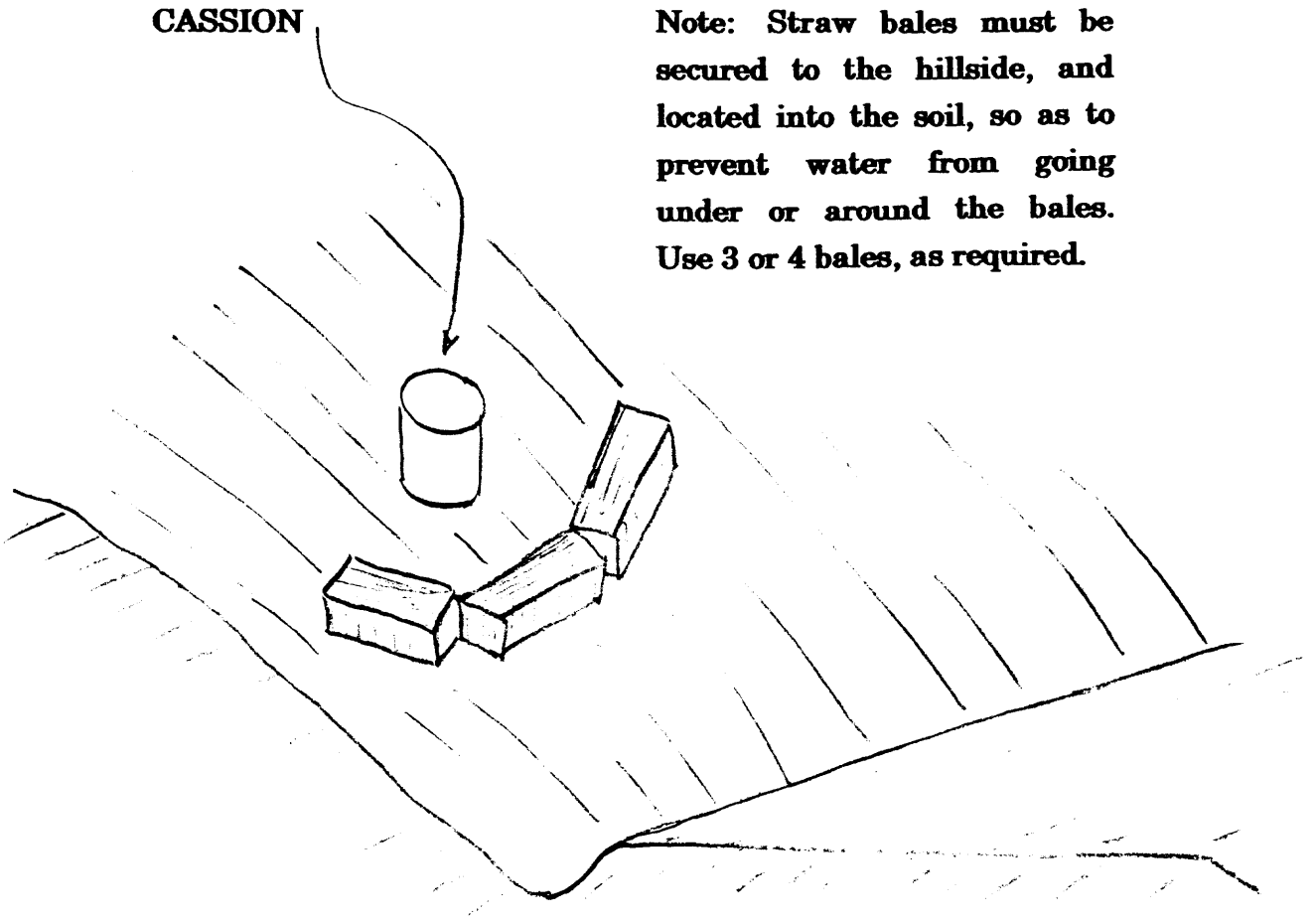


Note: The toe of the silt fence must be buried to prevent water and silt from going underneath.

TYPICAL HILLSIDE SECTION

SILT FENCE EROSION CONTROL

KZ 5-12-92



Note: Straw bales must be secured to the hillside, and located into the soil, so as to prevent water from going under or around the bales. Use 3 or 4 bales, as required.

TYPICAL HILLSIDE SECTION

STRAW BALE EROSION CONTROL

KZ 5-12-92